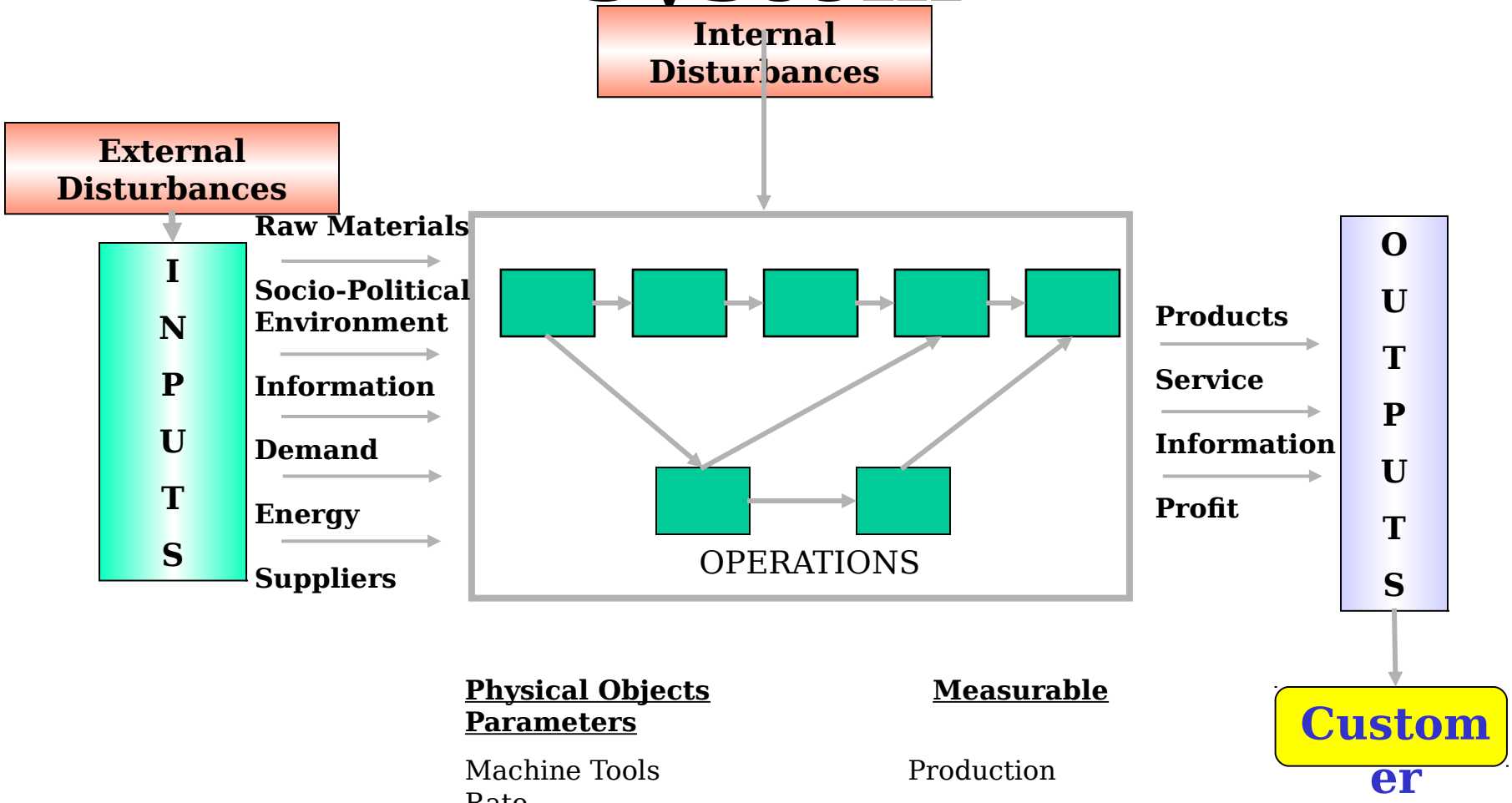
A Manufacturing System



Physical Objects Parameters	Measurable
Machine Tools	Production Rate
Tools	Cycle Times
Matl. Handling Equipment	Defects per Million
People	Unit Cost

What is a Manufacturing System?

“A ROI-oriented, highly interactive network of processes through which materials and information flow.”

Adapted from Hopp and Spearman Factory Physics

What is a Manufacturing System?

The arrangement and operation of machines, tools, people, suppliers, material and information to produce a value- added product, whose success and cost are characterized by measurable parameters.

Why are Mfg Systems so hard to manage?

- Interactions
- Time lags
- Non-linearities
- People
- Conflicting goals
- Short-term vs Long-term benefits
- Effect of uncontrollable external forces
- Must interface with design & suppliers

CLASSIC SYSTEMS BEHAVIOR !

A COMPLEX, TIGHTLY COUPLED NETWORK